

MAR 27 1957

March 26, 1957

SMALL SCALE SCREW-WORM OPERATION TO STUDY PROCEDURES
IN ERADICATING THE INSECTS BY RELEASING STERILE MALE FLIES

Plans for a pilot test area in Florida to evaluate and improve procedures for control of the screw-worm by the release of sterile male flies was developed during and after meetings with representatives of the Animal Disease Eradication Division, Plant Pest Control Division, and Entomology Research Division in Dr. W. L. Popham's office March 19 and 25, 1957. At this latter meeting Dr. C. L. Campbell, Secretary of the Florida Livestock Board, was in attendance.

The major purposes of the small scale program planned is to bridge the gap between small scale research projects and the extensive operational programs in a possible future eradication effort and to train control personnel in operational procedures. Sterile males will be released at a rate of about 400 to 500 per square mile per week over a minimum of two thousand square miles for a continuous period of four months beginning May 1. Studies in the area will begin about two weeks before releases begin and observations on effectiveness of the treatment will be continued for at least a month after release of flies is terminated. This release of flies for this short period will give valuable information on operational procedures but cannot be expected to cause much actual reduction of screw-worm cases in the treatment area because of migration of flies into and out of an area even as large as 2,000 square miles. The small scale operation will make it possible to train personnel in techniques which would be invaluable if an all out eradication program is undertaken sometime in the future.

A major objective in the study is to test and perfect automatic dispersal devices for releasing the flies from aircraft. The airplane fly dispersal devices now being developed by the Methods Improvement Section of the Plant Pest Control Division will be used in the test if they are available in time. If not available at the start of the test they will be tested before completion of the experiment. However, if such equipment is not perfected during this small scale operational program, an important aspect of the work will have to be given further attention in subsequent tests.

The program will also provide opportunities to test and improve ways of rearing larvae and to determine the best way to construct the larval rearing facilities so as to reduce floor space needed and manpower required. Release of flies for the experiment will start about May 1.

The State of Florida through the State Livestock Board has made a verbal offer to assist in financing this program to the extent of \$22,350. A Cooperative agreement is in process of being executed. These funds will be used for equipment, materials, and salaries before the end of this fiscal year. In addition to these funds, the Animal Disease Eradication Division will furnish one technical man to assist and study the over-all program,

four laymen type personnel to work one month each in the field plot, and four panel delivery trucks. They may be in a position to assign more personnel at a later date. The Methods Improvement Section will continue development of dispersal devices on aircraft. The Entomology Research Division will furnish technical personnel and other personnel services as well as materials and facilities.

It is believed that a good program can be carried out with the funds and personnel listed on the accompanying sheet. The proposed organization of the project together with the function of each group of personnel is shown in the chart.

ESTIMATED COSTS OF SCREW-WORM PILOT TEST AT ORLANDO 4 to 6 MONTHS
(April - October 1957)

A. Current Staff:

R. C. Bushland	GS-13 (In charge of Kerrville, Texas, laboratory but will direct pilot test at Orlando)
C. L. Smith	GS-12
A. H. Baumhover	GS-9
A. J. Graham	GS-9
C. C. Skipper	GS-9
F. H. Dudley	GS-5 Bio. Aid
W. D. New	GS-5 Bio. Aid
F. E. Tyo	wage board
Daniel Smith	wage board
K. L. Hamm	wage board

Current Facilities and Supplies Available:

Buildings and equipment for rearing approximately 1 million larvae per week, some vehicles, cages, etc.

B. New Personnel Needed:

	<u>Total Program</u>	<u>April 1 to June 30</u>	<u>July 1 to Oct. 1</u>
8 GS-2 laborers - 4 months	\$ 8,000	\$ 4,000	\$ 4,000
4 GS-4 biological aids - 6 months	7,200	3,600	3,600
1 GS-11 engineer transferred from Cotton Insects (Husman - 3 months' salary, plus travel and per diem)	2,000	2,000	---

C. Facilities and Equipment Needed:

Aircraft rental 90 hrs./mo. @ \$12/hr.--3 mo.	7,000	3,500	3,500
Enlarging space at larvae rearing plant	1,000	1,000	---
Air conditioners to maintain correct temperature in new rearing room	600	600	---
Material for new rearing vats	5,000	5,000	---
Release cartons and other devices	2,000	2,000	---
Gas, oil, vehicle upkeep, travel, and per diem	5,000	2,000	3,000
Goats	3,000	3,000	---
Goat pens	800	800	---
Goat feed	1,800	1,000	800
Medium (meat and blood)	<u>14,000</u>	<u>7,000</u>	<u>7,000</u>
	\$ 57,400	\$ 35,500	\$ 21,900

Release program to start May 1 and end September 1. Florida \$22,350 to be used before June 30.

SCREW-WORM PILOT TEST

Bushland, R. C.	GS-13	In Charge
Smith, C. L.	GS-12	Procurement & General Assistance
Husman, C. N.	GS-11	Engineer
Collaborators and Trainees from ADE and PPC		

PRODUCTION OPERATIONS

Colony Maintenance

Dudley, F. H.	GS- 5
Vacancy (1)	Wage Board

Larval Rearing

Graham, A. J.	GS- 9
Vacancy (2)	Wage Board
Vacancy (4)	GS- 2

Pupae Collection & Storage

Vacancy (1)	GS- 2
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Irradiation & Packaging

New, W. D.	GS- 5
Vacancy (2)	GS- 2

Fly Delivery

Vacancy (1)	GS- 2
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FIELD OPERATIONS

Baumhover, A. H.	GS- 9
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Case Records

Skipper, C. C.	GS- 9
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Egg Collections, Studies & Other
(12 Stations)

Vacancy (4)	Bio. Aids	GS- 4
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Dispersal of Flies

Pilot & Aircraft	(Contract)
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1. Name of the person

2. Date of birth

3. Address

4. Occupation

5. Education

6. Marital status

7. Religion

8. Languages spoken

9. Other details

10. Signature

11. Date

12. Remarks